Table E1. Diagnostic Performance of CTA for Detection of All Cerebral Aneurysms on a Per-Patient Basis

Parameter	Resu	ılts (No.	of Find	dings)	Test Performance (%)					
	TP	TN	FP	FN	Sensitivity	Specificity	PPV	NPV	Accuracy	
Overall										
R1	889	451	7	19	97.9 (889/908) [96.8, 98.7]	98.5 (451/458) [96.9, 99.3]	99.2 (889/896) [98.4, 99.6]	96.0 (451/470) [93.8, 97.4]	98.1 (1340/1366) [97.2, 98.7]	
R2	891	454	4	17	98.1 (891/908) [97.0, 98.8]	99.1 (454/458) [97.8, 99.7]	99.6 (891/895) [98.9, 99.8]	96.4 (454/471) [94.3, 97.7]	98.5 (1345/1366) [97.7, 99.0]	
With intracranial hemorrhage										
R1	778	386	6	17	97.9 (778/795) [96.6, 98.7]	98.5 (386/392) [96.7, 99.3]	99.2 (778/784) [98.3, 99.7]	95.8 (386/403) [93.4, 97.4]	98.1 (1164/1187) [97.1, 98.7]	
R2	780	388	4	15	98.1 (780/795) [96.9, 98.9]	99.0 (388/392) [97.4, 99.6]	99.5 (780/784) [98.7, 99.8]	96.3 (388/403) [94.0, 97.7]	98.4 (1168/1187) [97.5, 99.0]	
Without intracranial hemorrhage										
R1	111	65	1	2	98.2 (111/113) [93.8, 99.5]	98.5 (65/66) [91.9, 99.7]	99.1 (111/112) [95.1, 99.8]	97.0 (65/67) [89.8, 99.2]	98.3 (176/179) [95.2, 99.4]	
R2	111	66	0	2	98.2 (111/113) [93.8, 99.5]	100 (66/66) [94.5, 100]	100 (111/111) [96.7, 100]	97.1 (66/68) [89.9, 99.2]	98.9 (177/179) [96.0, 99.7]	

Note.—Data in parentheses are numerators and denominators; data in brackets are 95% confidence intervals. There were 1366 aneurysms detected. FN = false-negative finding, FP = false-positive finding, NPV = negative predictive value, PPV = positive predictive value, R1 = reader 1, R2 = reader 2, TN = true-negative finding, TP = true-positive finding.

Table E2. Diagnostic Performance of CTA for Detection of Overall and Large Cerebral Aneurysms

Parameter	Res	ults (No.	of Find	ngs)	Test Performance (%)					
	TP	TN	FP	FN	Sensitivity	Specificity	PPV	NPV	Accuracy	
Overall										
R1	1100	451	16	41	96.4 (1100/1141) [95.2, 97.7]	96.6 (451/467) [94.8, 98.3]	98.6 (1100/1116) [97.7, 99.1]	91.7 (451/492) [89.0, 93.8]	96.5 (1551/1608) [95.4, 97.3]	
R2	1101	454	14	40	96.5 (1101/1141) [95.3, 97.7]	97.0 (454/468) [95.4, 98.7]	98.7 (1101/1115) [97.9, 99.3]	91.9 (454/494) [89.2, 94.0]	96.6 (1555/1609) [95.7, 97.4]	
>5 mm										
R1	423	451	0	7	98.4 (423/430) [97.2, 99.6]	100 (451/451) [99.2, 100]	100 (423/423) [99.1, 100]	98.5 (451/458) [96.9, 99.3]	99.2 (874/881) [98.4, 99.6]	
R2	423	454	0	7	98.4 (423/430) [97.2, 99.6]	100 (454/454) [99.2, 100]	100 (423/423) [99.1, 100]	98.5 (454/461) [96.9, 99.3]	99.2 (877/884) [98.4, 99.6]	

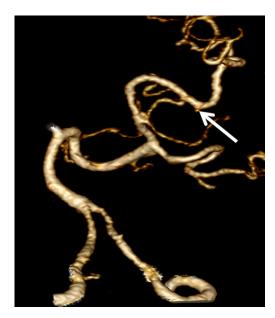
Note.—Data in parentheses are numerators and denominators; data in brackets are 95% confidence intervals. There were 1366 aneurysms detected. FN = false-negative finding, FP = false-positive finding, NPV = negative predictive value, PPV = positive finding.

Table E3. Diagnostic Performance of CTA for Detection of All Cerebral Aneurysms with Different Sizes Located at Anterior and Posterior Circulation

	Re	sults (No	o. of Find	lings)	Test Performance (%)						
	TP	TN	FP	FN	Sensitivity	Specificity	PPV	NPV	Accuracy		
Anterior circulation Overall											
R1	980	451	14	31	96.9 (980/1011) [95.6, 98.2]	97.0 (451/465) [95.3, 98.6]	98.6 (980/994) [97.7, 99.2]	93.6 (451/482) [91.0, 95.4]	97.0 (1431/1476) [95.9, 97.7]		
R2	981	454	12	30	97.0 (981/1011) [95.8, 98.3]	97.4 (454/466) [95.9, 99.0]	98.8 (981/993) [97.9, 99.3]	93.8 (454/484) [91.3, 95.6]	97.2 (1435/1477) [96.2, 97.9]		
>5 mm											
R1	369	451	0	3	99.2 (369/372) [97.6, 100]	100 (451/451) [99.2, 100]	100 (369/369) [99.0, 100]	99.3 (451/454) [98.1, 99.8]	99.6 (820/823) [98.9, 99.9]		
R2	369	454	0	3	99.2 (369/372) [97.6, 100]	100 (454/454) [99.2, 100]	100 (369/369) [99.0, 100]	99.3 (454/457) [98.1, 99.8]	99.6 (823/826) [98.9, 99.9]		
3–5 mm											
R1	460	451	7	10	97.9 (460/470) [96.3, 99.4]	98.5 (451/458) [97.3, 99.6]	98.5 (460/467) [96.9, 99.3]	97.8 (451/461) [96.1, 98.8]	98.2 (911/928) [97.1, 98.9]		
R2	463	454	8	7	98.5 (463/470) [97.1, 99.9]	98.3 (454/462) [97.1, 99.5]	98.3 (463/471) [96.7, 99.1]	98.5 (454/461) [96.9, 99.3]	98.4 (917/932) [97.4, 99.0]		
<3 mm					[0.1.1, 00.0]	[,]	[,]	[,]	[0.11, 00.0]		
R1	151	451	7	18	89.3 (151/169) [84.1, 94.6]	98.5 (451/458) [97.2, 99.7]	95.6 (151/158) [91.1, 97.8]	96.2 (451/469) [94.0, 97.6]	96.0 (602/627) [94.2, 97.3]		
R2	149	454	4	20	88.2 (149/169) [82.4, 94.0]	99.1 (454/458) [98.3, 100]	97.4 (149/153) [93.5, 99.0]	95.8 (454/474) [93.6, 97.3]	96.2 (603/627) [94.4, 97.4]		
Posterior circulation					. , ,	. , .	. , ,	, ,			
Overall											
R1	120	451	2	10	92.3 (120/130) [86.9, 97.7]	99.6 (451/453) [98.9, 100]	98.4 (120/122) [94.2, 99.6]	97.8 (451/461) [96.1, 98.8]	97.9 (571/583) [96.4, 98.8]		
R2	120	454	2	10	92.3 (120/130) [86.9, 97.7]	99.6 (454/456) [99.0, 100]	98.4 (120/122) [94.2, 99.6]	97.8 (454/464) [96.1, 98.8]	98.0 (574/586) [96.5, 98.8]		
>5 mm					•	•	•	•	•		
R1	54	451	0	4	93.1 (54/58) [84.0, 100]	100 (451/451) [99.2, 100]	100 (54/54) [93.4, 100]	99.1 (451/455) [97.8, 99.7]	99.2 (505/509) [98.0, 99.7]		
R2	54	454	0	4	93.1 (54/58) [84.0, 100]	100 (454/454) [99.2, 100]	100 (54/54) [93.4, 100]	99.1 (454/458) [97.8, 99.7]	99.2 (508/512) [98.0, 99.7]		
3–5 mm					, ,		. , ,	, ,	,		
R1	46	451	0	2	95.8 (46/48) [86.1, 100]	100 (451/451) [99.2, 100]	100 (46/46) [92.3, 100]	99.6 (451/453) [98.4, 99.9]	99.6 (497/499) [98.6, 99.9]		
R2	47	454	0	1	97.9 (47/48) [93.8, 100]	100 (454/454) [99.2, 100]	100 (47/47) [92.4, 100]	99.8 (454/455) [98.8, 100]	99.8 (501/502) [98.9, 100]		
<3 mm					[55.5, 100]	[55.2, 100]	[0=: 1, 100]	[55.5, 155]	[55.5, 155]		
R1	20	451	2	4	83.3 (20/24) [62.8, 100]	99.6 (451/453) [98.9, 100]	90.9 (20/22) [72.2, 97.5]	99.1 (451/455) [97.8, 99.7]	98.7 (471/477) [97.3, 99.4]		
R2	19	454	2	5	79.2 (19/24) [58.1, 100]	99.6 (454/456) [99.0, 100]	90.5 (19/21) [71.1, 97.4]	98.9 (454/459) [97.5, 99.5]	98.5 (473/480) [97.0, 99.3]		

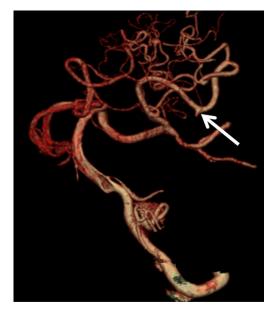
Note.—Data in parentheses are numerators and denominators; data in brackets are 95% confidence intervals. There were 1366 aneurysms detected. FN = false-negative finding, FP = false-positive finding, NPV = negative predictive value, PPV = positive predictive value, R1 = reader 1, R2 = reader 2, TN = true-negative finding, TP = true-positive finding.

## SUPPLEMENTAL FIGURE



Click to view full image

a.



Click to view full image

b.

**Figure E1.** A false-negative aneurysm of posterior cerebral artery in a 45-year-old woman with Moyamoya disease. **(a)** Volume-rendered DSA CT image shows a small aneurysm at the right posterior cerebral artery (arrow) that was missed in the initial evaluation by two readers. **(b)** Volume-rendered 3D DSA image shows that small posterior cerebral artery aneurysm (arrow) with a diameter of 1.86 mm.